



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Sorrells *et al.*

Appl. No. 09/476,092

Filed: January 3, 2000

For: **Analog Zero IF FM Decoder and  
Embodiments Thereof, Such as the  
Family Radio Service**

Art Unit: 2682

Examiner: Kincaid, L.

Atty. Docket: 1744.0250001

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**Supplemental Information Disclosure Statement**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

The reference numbering on the accompanying Form PTO-1449 for this Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Information Disclosure Statement, filed January 11, 2002 in connection with the above-captioned application.

Applicants provide the following comments regarding the documents listed on the accompanying Form PTO-1449:

Document AP55 was cited in an Examination Report in co-pending European Patent Application Serial No. 99954905.8, filed October 18, 1999, entitled "Integrated Frequency Translation and Selectivity with a Variety of Filter Embodiments," directed to related subject matter. Also cited in said report were German Patent No. DE4237692C1, PCT Publication Nos. WO 96/02977, WO 96/08078 and WO 96/39750, U.S. Patent Nos. 5,483,721, 5,557,641 and 5,640,424 and Rabiner, L.R. and Gold, B., *Theory And Application Of Digital Signal Processing*, Prentice-Hall, Inc., pp. xiii-xii and 40-46 (1975), which were previously cited in the present application in the Information Disclosure Statement, filed January 11, 2002.

Documents AL15, AM15, AJ16-AM16 and AJ17-AM17 were cited in an Examination Report in co-pending Japanese Patent Application No. 2000-577,764, filed June 21, 2000, entitled "Applications of Frequency Translation," directed to related subject matter.

Documents AJ18-AL18, AB47, AC47 and AE47-AG47 were cited by an Examiner in co-pending U.S. Patent Application Serial No. 09/489,675, filed January 24, 2000, entitled "Bar Code Scanner Using Universal Frequency Translation Technology for Up-Conversion and Down-Conversion," directed to related subject matter.

Documents AM18 and AJ19 were cited in an International Search Report in co-owned PCT Application Serial No. PCT/US00/31659, filed November 20, 2000, entitled "Phase Shifting Applications of Universal Frequency Translation," directed to related subject matter. Also cited in the Search Report were U.S. Patent No. 4,855,894 and PCT Publication No. WO 99/23755, which were previously cited in the present application in the Information Disclosure Statement, filed January 11, 2002.

Documents AK19 and AF48 were cited in an International Search Report in co-owned PCT Application Serial No. PCT/US01/15111, filed May 10, 2001, entitled "Method and Apparatuses Relating to a Universal Platform Module and Enabled by Universal Frequency Translation Technology," directed to related subject matter.

Document AD47 was cited by an Examiner in co-pending U.S. Patent Application Serial No. 09/376,509, filed August 18, 1999, entitled "Method and System for Ensuring Reception of a Communications Signal," directed to related subject matter. Also cited by the Examiner was U.S. Patent No. 5,369,800, which was previously cited in the present application in the Information Disclosure Statement, filed January 11, 2002.

Documents AH47, AI47 and AA48-AE48 are co-owned patents which are directed to related subject matter.

Documents AH47 and AH48 were cited by an Examiner in co-pending U.S. Patent Application Serial No. 09/293,283, filed April 16, 1999, entitled "Integrated Frequency Translation and Selectivity with a Variety of Filter Embodiments," directed to related subject matter. Also cited by the Examiner was U.S. Patent No. 5,126,682, which was previously cited in the present application in the Information Disclosure Statement, filed January 11, 2002.

Document AG48 was cited by an Examiner in co-pending U.S. Patent Application Serial No. 09/476,091, filed January 3, 2000, entitled "Image-Reject Down-Converter and Embodiments Thereof, Such as the Family Radio Service," directed to related subject matter. Also cited by the Examiner was U.S. Patent No. 5,901,349, which was previously cited in the present application in the Information Disclosure Statement, filed January 11, 2002.

It is noted that some of these documents could be classified in more than one of the above categories.

This statement should not be construed that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☒ 1. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits . No statement or fee is required.
- ☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
  - ☐ c. Attached is our Check No. 33699 in the amount of \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
  - ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three

months prior to the filing of this Information Disclosure Statement.  
37 C.F.R. § 1.97(e)(1).

- ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 4. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☒ 5. Concise explanations of the relevance of non-English language documents AL15, AM15, AJ16-AM16, AJ17-AM17 and AJ18-AL18 appears below:
- Document AL15 (JP 47-2314) appears to describe a demodulator. A partial English language translation of document AL15 is enclosed as document AP53 on the attached PTO-1449.
- Document AM15 (JP 58-7903) appears to describe a switched capacitor modulator. A partial English language translation of document AM15 is enclosed as document AQ53 on the attached PTO-1449.
- Document AJ16 (JP 58-133004) appears to describe an amplitude detector. A copy of the English language abstract of document AJ16 is enclosed as document AR53 on the attached PTO-1449.
- Document AK16 (JP 60-58705) appears to describe a frequency converting circuit. A copy of the English language abstract of document AK16 is enclosed as document AN54 on the attached PTO-1449.
- Document AL16 (JP 4-123614) appears to describe a level converting circuit. A copy of the English language abstract of document AL16 is enclosed as document AO54 on the attached PTO-1449.

Document AM16 (JP 4-127601) appears to describe a frequency conversion circuit.

A copy of the English language abstract of document AM16 is enclosed as document AP54 on the attached PTO-1449.

Document AJ17 (JP 5-175730) appears to describe a time division direct receiver.

A copy of the English language abstract of document AJ17 is enclosed as document AQ54 on the attached PTO-1449.

Document AK17 (JP 5-175734) appears to describe an FM demodulator. A copy of the English language abstract of document AK17 is enclosed as document AR54 on the attached PTO-1449.

Document AL17 (JP 7-154344) appears to describe a receiver for receiving modulated carrier signals and an IQ mixer/demodulator using its receiving constitution. A copy of the English language abstract of document AL17 is enclosed as document AN55 on the attached PTO-1449.

Document AM17 (JP 7-307620) appears to describe a bottom detection circuit. A copy of the English language abstract of document AM17 is enclosed as document AO55 on the attached PTO-1449.

Document AJ18 (JP 55-66057) appears to describe a bar-code detection circuit. A copy of the English language abstract of document AJ18 is enclosed as document AQ55 on the attached PTO-1449.

Document AK18 (JP 63-65587) appears to describe a wireless light pen device. A copy of the English language abstract of document AK18 is enclosed as document AR55 on the attached PTO-1449.

Document AL18 (JP 63-153691) appears to describe a data transfer for a semiconductor data carrier system. A copy of the English language abstract of document AL18 is enclosed as document AN56 on the attached PTO-1449.

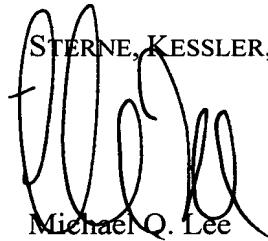
- 6. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036. A duplicate copy of this pleading is enclosed.

Respectfully submitted,

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Date: 6/4/02

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